



***Blackhawk  
Automotive*** <sup>TM</sup>

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# **Air Actuated Axle Jacks**

## **Operating Instructions & Parts Manual**

Model	Capacity
BH6221	22 Ton
BH6301	30 Ton

SFA Companies ©2004  
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- Before using this product, read this manual and follow all its Safety Rules and Operating Instructions

Made in Taiwan

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## ONE YEAR LIMITED WARRANTY

For a period of one (1) year from date of purchase, SFA Companies will repair or replace, at its option, without charge, any of its products which fails due to a defect in material or workmanship, or which fails to conform to any implied warranty not excluded hereby.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to SFA Companies Warranty Service Department, 10939 N. Pomona Ave., Kansas City, MO 64153. Except where such limitations and exclusions are specifically prohibited by applicable law:

(1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE.

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Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## SAVE THESE INSTRUCTIONS

For your safety, *read, understand, and follow* the information provided with and on these jacks. The owner and operator of these equipments shall have an understanding of these jacks and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of these products may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of these jacks are authorized. If any doubt exists as to the safe and proper use of these jacks, remove from service immediately.

**Inspect before each use.** Do not use if there are broken, bent, cracked or damaged parts (including labels). Any jack that appears damaged in any way, or operates abnormally shall be removed from service immediately. If the jack has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue to use until jack has been inspected by a Blackhawk Automotive authorized service center. It is recommended that an annual inspection be done by qualified personnel. Labels and Operator's Manual are available from manufacturer.

## PRODUCT DESCRIPTION

Blackhawk Air Actuated Axle Jacks are designed for **lifting**, not sustaining, loads ranging from 22 tons thru 30 tons depending on its model. They are designed to be used vertically. After lifting, loads must be **immediately** supported by other appropriate means such as jack stands. These jacks are **not recommended** for use in lifting or positioning construction trailers, mobile homes, houses and/or other building structures. These jacks comply with applicable **ASME / ANSI** Standards.

## SPECIFICATIONS

Model	Capacity (Ton)	Min. Ht.	Max. Ht.	Ext. Screw	Handle Length	Jack Size L x W	G.W.(Lbs.)
BH6221	22	9 7/8"	20 1/4"	4"	48 3/4"	22 7/8" x 12 1/2"	96
BH6301	30	11"	18"	N/A	48 3/4"	22 " x 12 1/2"	122

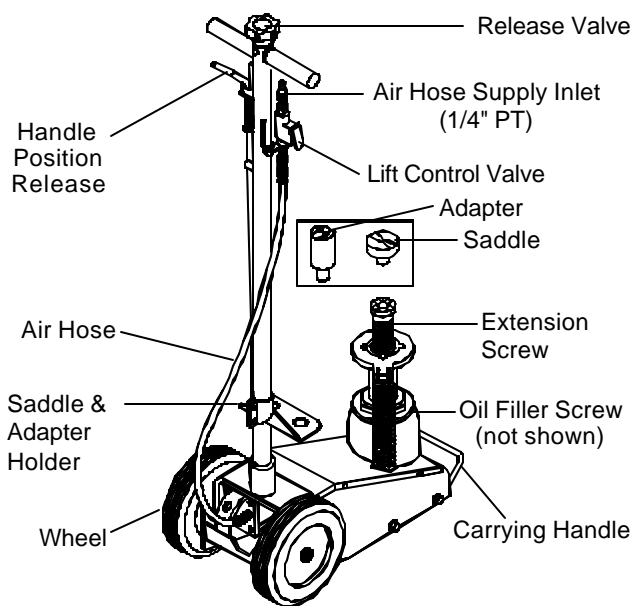


Figure 1- Model BH6221 Components

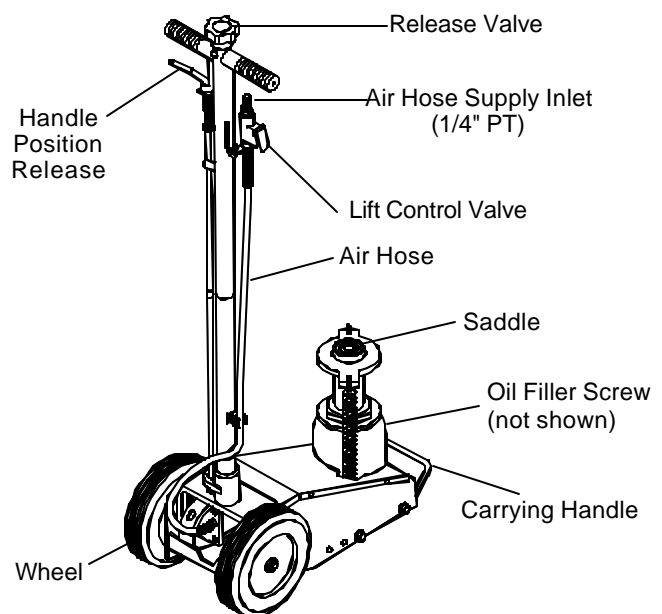


Figure 2 - Model BH6301 Components

## SAFETY INSTRUCTIONS

### BEFORE USE

1. Inspect the jack before each use. Do not use if there are bent, broken or cracked components.
2. Verify that the product and the application are compatible, if in doubt call Blackhawk Automotive Technical Service (816) 891-6390.
3. Read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the potential hazards associated with its use **before** using this product.
4. Open the release valve counterclockwise no more than 2 full turns.
5. Locate and remove the oil filler screw with ram fully retracted (refer to Replacement Parts section).

**NOTE:** This will help release any pressurized air which may be trapped within the reservoir.

6. Ensure the oil level is just below the oil filler screw hole.
7. Reinstall the oil filler screw.
8. Pour a teaspoon of good quality air tool lubricant into the air supply inlet of the lift control valve.
9. Connect to air supply and operate for 3 seconds to evenly distribute lubricant.
10. Ensure that jack rolls freely and that the air pump operates smoothly before putting into service.

**IMPORTANT:** Replace worn or damaged parts and assemblies with Blackhawk Authorized Replacement Parts only.

**NOTE:** This product is fitted to accept the popular 1/4" PT air nipple. When installing 1/4" PT nipple of your choice, ensure that thread tape or compound is used when servicing connections. To ensure dependable, trouble free operation an inline air dryer and oiler is recommended.

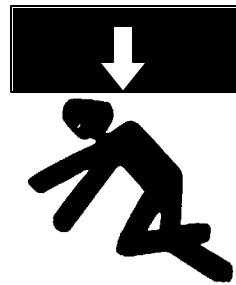
### WARNING

- Study, understand, and follow all instructions provided with and on this device before operating this device.
- Do not exceed rated capacity.
- Use the device only on a hard, level surface.
- This is a lifting device only.
- Immediately after lifting, support the vehicle with appropriate means such as jack stands.
- Never wire, clamp or otherwise disable the lift control valve to function by other than operator's hand.
- Do not modify or alter this device.
- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- Only use attachments and/or adapters supplied by the manufacturer shall be used.
- Do not use the device for any purpose other than that for which it is intended.
- Failure to heed these markings may result in personal injury and/or property damage.

### ! Safety Messages !

Be sure all tools and personnel are clear before lowering load.

### WARNING



To avoid crushing and related injuries:  
NEVER work on, under or around a load supported only by a jack. ALWAYS use adequately rated jack stands.

### ADVERTENCIA

- Leer, comprender, y seguir las instrucciones antes de utilizar el aparato.
- El manual de instrucciones y la información de seguridad deben estar comunicado en lengua del operador antes del uso.
- No seguir estas indicaciones puede causar daños personales o materiales.

## ASSEMBLY

Little, if any, assembly is required of this jack; refer to figure 1 and figure 2 for components location. Familiarize yourself with the illustrations in the operator's manual. Know your jack and how it operates before attempting to use. Assemble handle to the handle fork. Secure the handle with provided bolt to prevent inadvertent removal. Connect to adequate air source and ensure air control valve is secured into the pipe nipple of the jack.

## OPERATION

### Lifting

1. Use wheel chocks to help prevent inadvertent shifting and movement of vehicle being lifted.
2. Position the jack near lift point. Consult vehicle service manual for the location of recommended lift points.
3. Close the release valve by turning the handle mounted knob, clockwise until it is firmly closed.

**Important:** **Never** wire, clamp or otherwise disable the lift control valve to work by any means other than by using the operators hand.

**Caution:** Use only saddle extenders (if equipped) provided and recommended by the manufacturer of the jack. Lift only on the manufacturer's recommended lift points and in accordance with the published guidelines in your vehicle owners manual. Always use jack stands to support the load immediately after lifting.

4. Squeeze the lift control valve until saddle contacts load. Check to ensure proper saddle/lift point alignment. To end cycle, simply release the grip on the lift control valve.
5. Raise load to desired height, then immediately transfer the load to appropriately rated support devices such as jack stands.

### Lowering

1. Raise load high enough to clear the jack stands, then carefully remove jack stands (**always** used in pairs).
2. Slowly turn the release valve counterclockwise, but no more than 1/2 turn.

#### If the load fails to lower:

- a. Use another jack to raise the vehicle high enough to reinstall jack stands.
  - b. Remove the malfunctioning jack and then the stands.
  - c. Using the functioning jack, lower the load by turning the release valve counterclockwise, but no more than 1/2 turn.
3. Push ram and handle sleeve down to reduce exposure to rust and contamination after removing jack from under the load.

## MAINTENANCE

**Important:** Use only a good grade hydraulic jack oil. We recommend Hein-Werner HW93291 hydraulic oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load.

### Adding oil

1. Lower saddle fully and fully depress piston.
2. Set jack in its upright, level position.
3. Remove oil filler screw.
4. Fill with oil until just below the rim of the oil filler screw hole.
5. Reinstall the oil filler screw.

### Changing oil

For best performance, replace the complete hydraulic fluid annually.

1. Remove the oil filler screw with saddle fully lowered.
2. Lay the jack on its side and drain the fluid into a suitable container.
3. Fill with oil until just below the rim of the oil filler screw hole.
4. Reinstall the oil filler screw and cover plate.

**Note:** Dispose of hydraulic fluid in accordance with local regulations.

## LUBRICATION

1. A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that pump assemblies move freely.
2. When used on a daily basis, air pump should be internally lubricated before each use. Use **only** good quality air tool lubricant. If no inline oiler is used, pour a teaspoon of air tool oil into the inlet of the air control valve. Simply operate the jack using the air feature in order to fully distribute the oil.

## CLEANING

Periodically check the ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

**Note:** Never use sandpaper or abrasive material on these surfaces !

## STORAGE

Store the jack with ram fully retracted and air supply disconnected when not in use.

## TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none"><li>• Release valve not tightly closed</li><li>• Air supply inadequate</li></ul>	<ul style="list-style-type: none"><li>• Ensure release valve tightly closed</li><li>• Ensure adequate air supply</li></ul>
Jack will lift, but not maintain pressure	<ul style="list-style-type: none"><li>• Release valve not tightly closed</li><li>• Hydraulic unit malfunction</li></ul>	<ul style="list-style-type: none"><li>• Ensure release valve tightly closed</li><li>• Contact Blackhawk Tech. Service</li></ul>
Jack will not lower after unloading	<ul style="list-style-type: none"><li>• Reservoir overfilled</li></ul>	<ul style="list-style-type: none"><li>• Ensure load is removed, then drain fluid to proper level</li></ul>
Poor lift performance	<ul style="list-style-type: none"><li>• Fluid level low</li><li>• Air trapped in system</li></ul>	<ul style="list-style-type: none"><li>• Ensure proper fluid level</li><li>• With ram fully retracted, remove oil filler screw to let pressurized air escape, then reinstall oil filler screw</li></ul>
Will not lift to full extension	<ul style="list-style-type: none"><li>• Fluid level low</li></ul>	<ul style="list-style-type: none"><li>• Ensure proper fluid level</li></ul>

## REPLACEMENT PARTS

Available Parts: Please refer to the Parts drawing when ordering parts. Not all components of the jack are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence.

When ordering parts, give Model number, serial number and description below. Call or write for current pricing:

SFA Company 10939 N. Pomona Ave. Kansas City, MO 64153, U.S.A. Tel:(816)891-6390 Fax:(816)891-6599

E-Mail:sales@blackhawk-automotive.com

# Replacement Parts for Model BH6221

Item no.	Part no.	Description	Qty.
1	A09-4-2200-106	Handle Assembly	1
2	A09-3-2000-102	Air Motor Assembly	1
3	A07-6-1301-105	Handle Fork	1
4	A07-4-3400-509	Wheel	2
5	A09-6-3221-101	Cover Plate, Upper	1
6	A09-1-1001-217	Power Unit	1
7	523-2-0196-016	Return Spring	4
8	A07-5-1802-101	Spring Plate	1
9	A07-3-3300-307	Release Valve Cable	1
10	324-6-1902-305	Oil Filler Screw	1
11	A07-5-1108-105	Saddle	1
12	A07-6-1109-103	Adapter	1
13	A09-6-3124-104	Cover Plate, Lower	1
14	A09-6-1104-107	Saddle & Adapter Holder	1
-	BH6221-L0	Label (not shown)	1
-	BH6221-M0	Manual	1

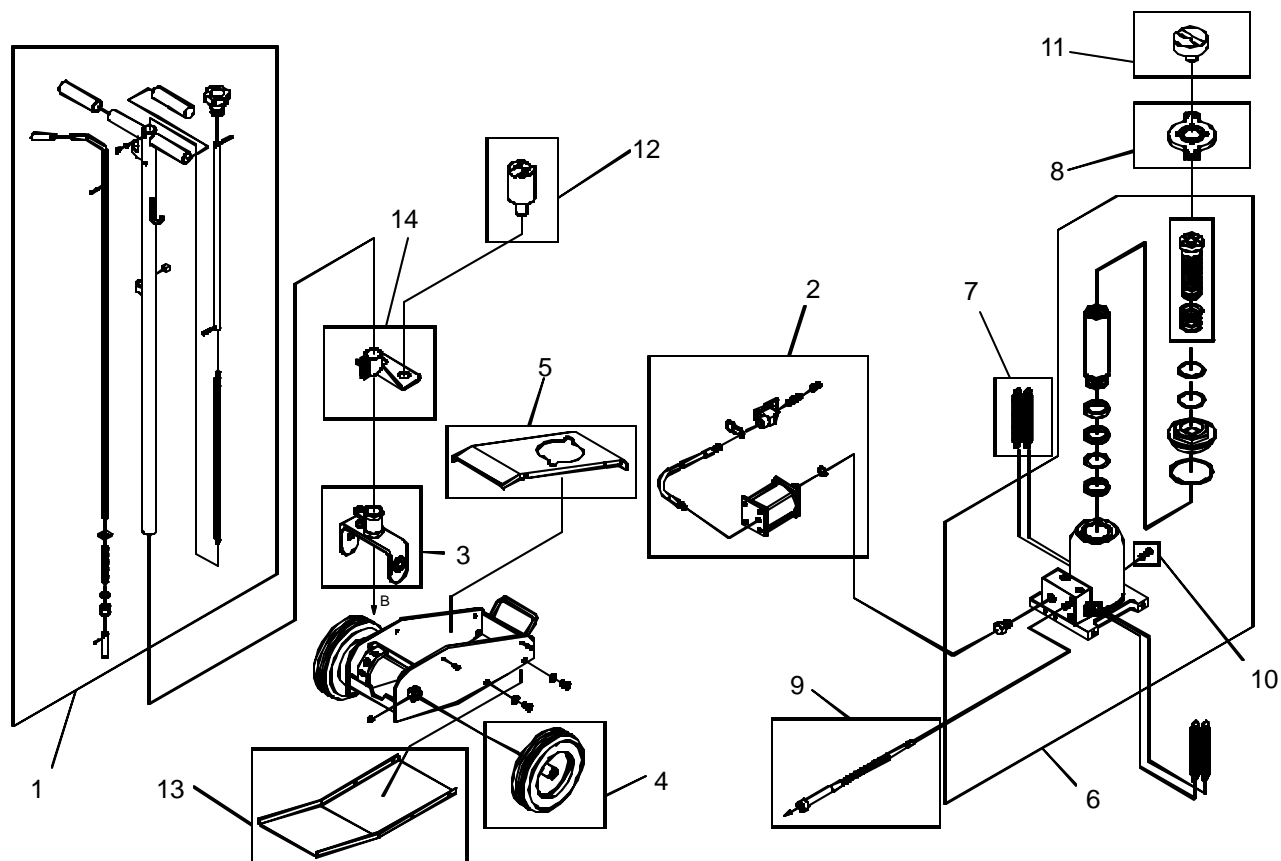


Figure 3 - Replacement Parts Illustration for Model BH6221

# Replacement Parts for Model BH6301

Item no.	Part no.	Description	Qty.
1	A09-4-2200-106	Handle Assembly	1
2	A27-3-9904-103	Air motor Assembly	1
3	A07-6-1301-105	Handle Fork	1
4	A07-4-3400-509	Wheel	2
5	A30-6-3220-100	Cover Plate, Upper	1
6	A30-1-1001-108	Hydraulic Unit	1
7	522-2-0260-003	Return Spring	4
8	A30-6-1802-102	Spring Plate	1
9	A07-3-3300-307	Release Valve Cable	1
10	324-4-1900-208	Oil Filler Screw	1
11	236-6-1103-207	Saddle Adapter	1
-	BH6301-L0	Label (not shown)	1
-	BH6221-M0	Manual	1

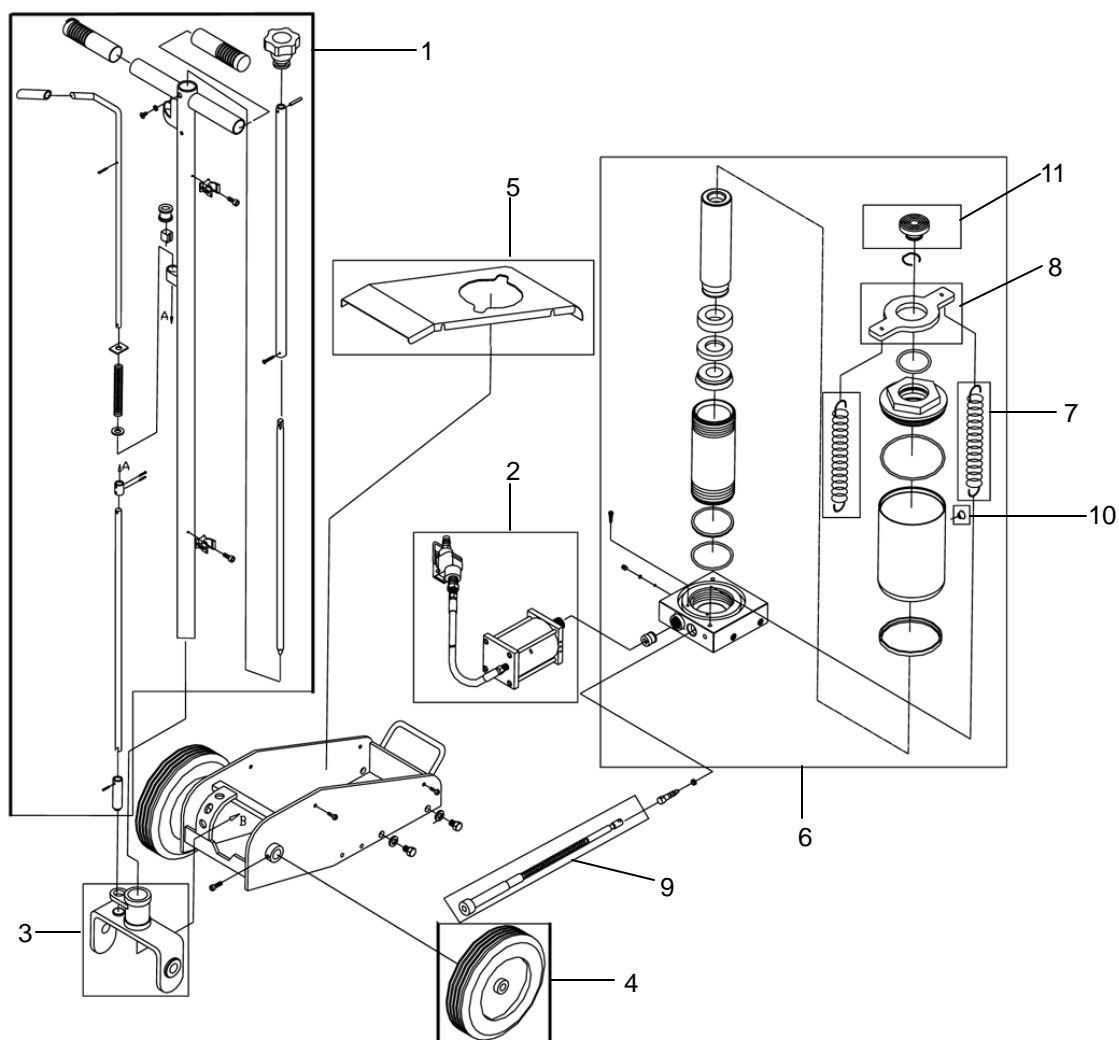


Figure 4 - Replacement Parts Illustration for Model BH6301